

State of California
The Resources Agency
DEPARTMENT OF WATER RESOURCES
Northern District

ESTIMATED FISHING USE AND CATCH AT
ANTELOPE RESERVOIR, PLUMAS COUNTY, 1979

Technical Information Report No. 80-2

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This report summarizes information collected under the Department's Instream Water Use Program, as part of an evaluation of the proposed reoperation of Antelope Reservoir (WO 1600-4268). This report has received only limited review, and should be considered preliminary and subject to revision.

SUMMARY

A survey of fishing use was conducted in 1979 on Antelope Lake, Plumas County. This was done in conjunction with a recreation survey on Indian Creek below the dam. Use counts and creel censuses were used to determine fishing use on the lake.

Anglers censused on Antelope Lake totalled 2,414 shore and 140 boat anglers. Shore anglers fished 5,510 hours and caught 1,550 rainbow trout (0.28 trout per hour). Boat anglers fished 321 hours and caught 176 trout (0.55 trout per hour). About 32 percent of anglers censused were from nearby counties, 35 percent from the Sacramento Valley area, and 16 percent from the San Francisco Bay area.

An estimated 70,000 hours (22,000 angler days) of shore fishing and 44,000 hours (13,000 angler days) of boat fishing occurred between April 28 and November 15, 1979. Shore anglers caught an estimated 19,000 rainbow trout and boat fishermen caught an estimated 20,000 rainbow trout.

INTRODUCTION

The Northern District of the Department of Water Resources is conducting a three-year study (1978, 1979, 1980) of recreation use on Indian Creek, Plumas County. In response to a request from Region 2, Department of Fish and Game, fishing on Antelope Lake was measured as an extension of the Indian Creek study. Creel census and use counts were conducted from April 28 to November 15, 1979.

Antelope Dam, a part of the State Water Project, was completed in 1964. The primary purpose of Antelope Reservoir is to provide recreation opportunities. The lake is open to fishing year round and is stocked regularly through the summer by the Department of Fish and Game. The Department of Water Resources controls the release from Antelope Dam to keep the lake level high for recreation and to maintain good conditions for trout in Indian Creek. For most of the 1979 survey season, the release from the dam was $0.28 \text{ m}^3/\text{s}$ ($10 \text{ ft}^3/\text{s}$) from June 10 to November 15 except for five days in September when the release was $0.14 \text{ m}^3/\text{s}$ ($5 \text{ ft}^3/\text{s}$).

In 1978, a creel census was conducted at Antelope Lake between June 9 and November 4 by DWR Student Assistants and DFG Seasonal Aids. No use counts were made in 1978. Work on Antelope Lake was expanded in 1979 with expectation of assistance from DFG Region 2 personnel. The survey was initiated on April 28 when trout season opened and the Indian Creek survey began. The objective of the survey was to conduct creel census and use counts periodically throughout the summer.

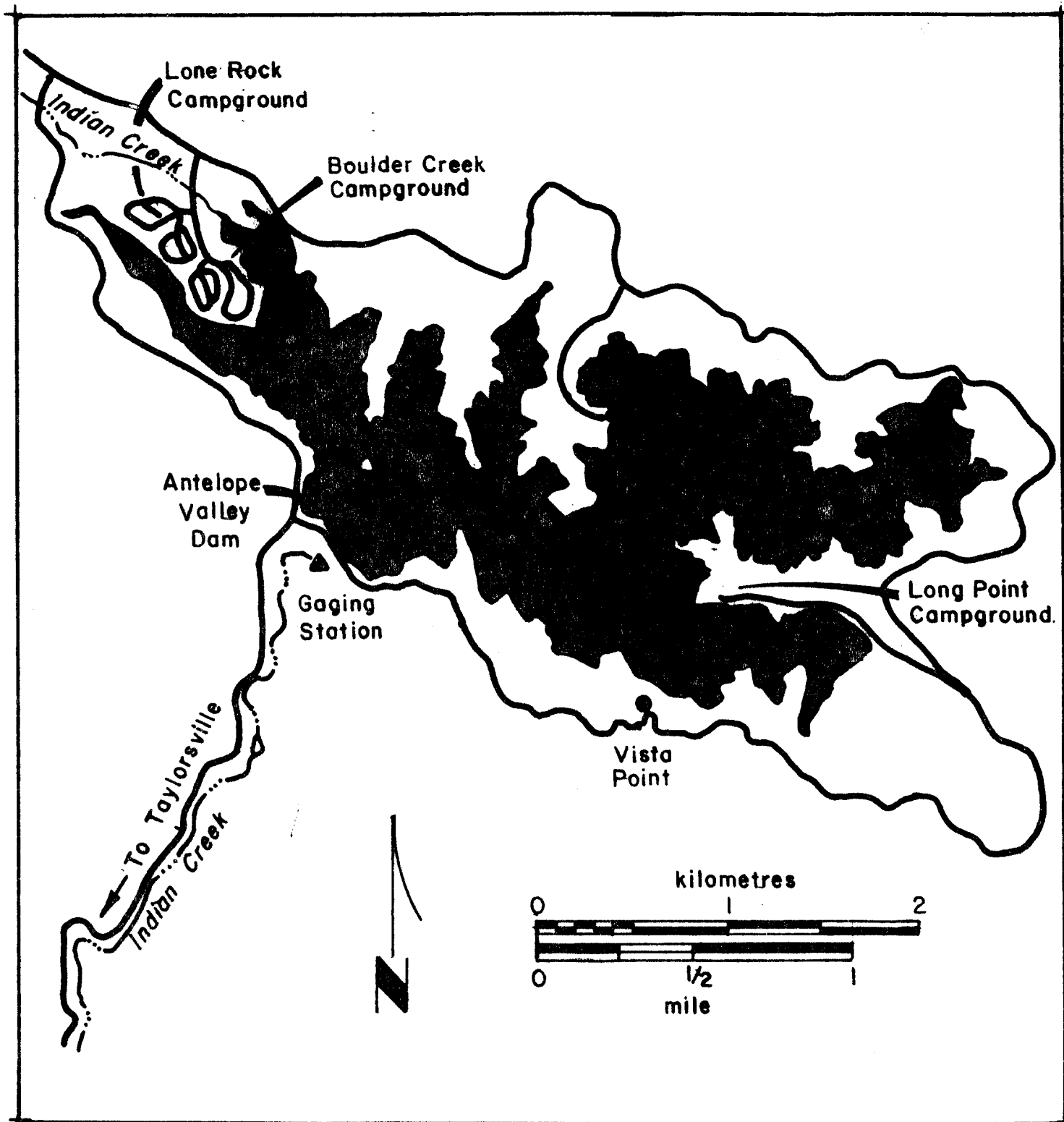


Figure 1—Antelope Lake, Plumas County

DESCRIPTION OF STUDY AREA

Antelope Lake is located approximately 272 km (170 mi) northeast of Sacramento and 136 km (85 mi) northwest of Reno on Indian Creek, a tributary to the East Branch of the North Fork Feather River (Figure 1). Antelope Dam is an earthfilled dam constructed with 290 500 m³ (380,000 yd³) of fill. Storage capacity of Antelope Lake is 27 835 dam³ (22,556 ac ft) with a surface area of 3.8 km² (931 acres), shoreline of 24 km (15 mi), and maximum depth of 19 m (62 ft). The spillway elevation is 1 525 m (5,002 ft).

Recreation facilities are provided and maintained by the U. S. Forest Service and consist of 3 public campgrounds with 156 campsites, a boat ramp, and trailer sanitation station. There are also several picnic areas available for day use and two historical sites.

METHODS

Creel Census

Creel census took place on 54 days of the 201-day trout season from April 28 to November 15, 1979. Creel census effort was concentrated near Antelope Dam. Anglers were interviewed throughout the day and residence, number of hours fished, number and species of fish, fish length (to nearest 0.5 cm (0.2 in) and time of day recorded. Both shore and boat anglers were interviewed, although shore fishermen were much more accessible. Hours fished and fish caught were totalled for each day and month. Catch per effort was determined by month for the survey season.

Use Counts

On 46 days of the trout season, use counts were conducted one to three times a day from the dam, a peninsula east of the dam overlook area, and the vista point. Total counts of the entire lake were made when time permitted and were used to determine expansion factors to estimate total lake use from the dam, peninsula, and vista point counts. Separate factors were determined for boat and shore anglers. The one to three daily counts were totalled and multiplied by factors to estimate hours of fishing for the day and month. Adding the monthly totals provided an estimate of angler hours for the study period. To estimate total angler days, total angler hours were divided by the mean length of stay calculated from census data. Numbers of rainbow trout and brown bullhead caught each month were estimated from total angler hours and the catch rate from creel census data.

RESULTS

Creel Census

We interviewed 2,554 anglers: 2,414 shore anglers and 140 boat anglers. Shore anglers fished 5,510 hours and caught 1,550 rainbow trout (0.28 trout per hour) (Table 1). Boat anglers fished 321 hours and caught 176 trout (0.55 trout per hour) (Table 2). Rainbow trout censused ranged in length from 10 to 43.5 cm (3.9 to 17.1 in) with most fish ranging from 23 to 30 cm (9.1 to 11.8 in) (Figure 2). Brown bullhead were also censused with 481 caught during the survey period (0.08 per hour).

We contacted 275 shore anglers and 18 boat anglers who had finished fishing. The average length of stay for shore and boat anglers combined was 3.2 hours. Anglers with completed efforts caught 357 rainbow trout in 947 hours of fishing (0.38 per hour). Thirty-nine brown bullheads were also caught (0.04 per hour).

TABLE 1
 ANTELOPE LAKE, 1979
 SUMMARY OF CATCH PER HOUR (SHORE ONLY) BY MONTH^{1/}

Month	Anglers	Angler Hours	Rainbow Trout Caught	Catch Per Hour	Other Fish Caught	
					Brown Bullhead	Golden Shiners
April	203	546	176	0.32	-	-
May	432	947	387	0.41	83	-
June	562	1393	455	0.33	42	-
July	631	1574	287	0.18	70	-
August	370	590	112	0.19	162	2
September	197	402	103	0.26	108	-
October	8	40	22	0.54	1	-
November	11	18	8	0.44	4	-
Total	2414	5510	1550	0.28	470	2

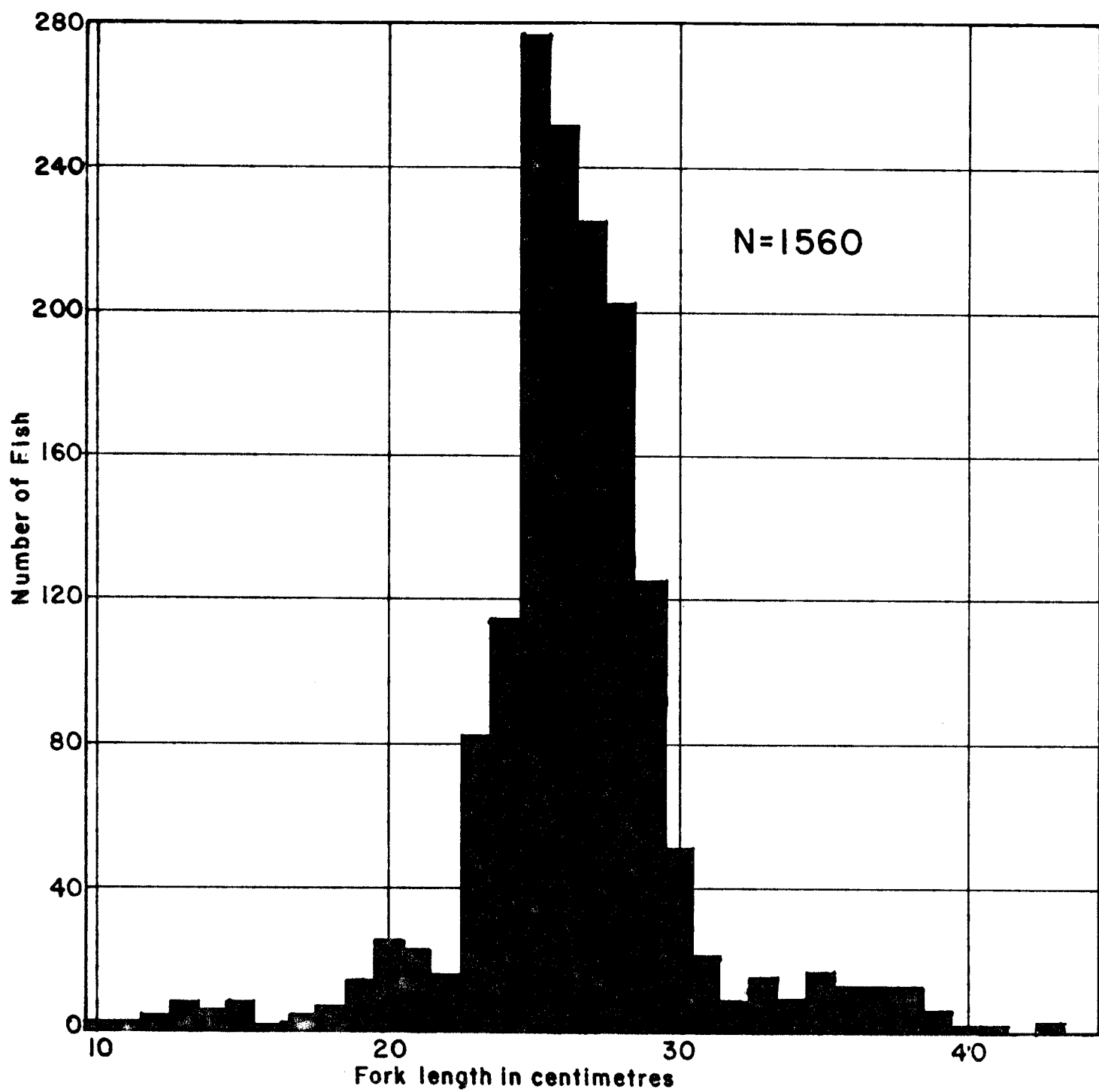
^{1/} April 28 to November 15

TABLE 2

ANTELOPE LAKE, 1979
SUMMARY OF CATCH PER HOUR (BOAT ONLY) BY MONTH^{1/}

Month	Anglers	Angler Hours	Rainbow Trout Caught	Catch Per Hour	Brown bullhead Caught
April	9	25	32	1.28	-
May	28	54	58	1.08	-
June	44	111	53	0.48	2
July	33	88	3	0.03	5
August	7	19	7	0.37	-
September	19	24	23	0.96	4
Total	140	321	176	0.55	11

^{1/} April 28 to November 15



**Figure 2—Length and Frequency of Censused Rainbow Trout
Antelope Lake 1979**

Most of the trout caught were apparently planted in 1978. Sub-catchables planted in July entered the fishery in the fall (Table 3). Small fish appeared in September that presumably came from plants of fingerlings early in the season.

Anglers from 48 counties were censused. The majority of anglers were from the Sacramento Valley area (35%), local counties (32%), and the San Francisco Bay area (16%). The North Coast and Southern California counties provided 13 percent of the anglers and the remaining 4 percent had out-of-state origin (Figure 3).

Use Counts

Total fishing use on Antelope Lake was estimated to be 114,000 hours (70,000 shore angler-hours and 44,000 boat angler-hours) for the April 28 to November 15 survey period. Total angler days were 35,000 (total angler-hours divided by the average angler day length). An estimated 19,000 rainbow trout were caught by shore anglers and 20,000 by boat anglers. Approximately 9,000 brown bullheads were also caught by shore and boat anglers (Table 4).

DISCUSSION

Limitations of Creel Census

Most shore anglers were censused at Antelope Dam due to easy accessibility, limitations of time, and angler preference of the area. Relatively few anglers were contacted at other areas of the lake. Overall, about 8 percent of the estimated total shore angler-hours were censused during the survey.

TABLE 3

ANTELOPE LAKE, 1979
TROUT PLANTING SUMMARY

<u>Date</u>	<u>Species</u>	<u>Number</u>	<u>No. per Lb.</u>
July 18	*RT-S x RT-KJ	100,800	448
July 3	RT-W x RT-KJ	8,000	10
September 6	RT-S	55,000	55
September 11	RT-S	45,090	54
October 1	RT-H	15,000	5
October 3	RT-W	<u>45,090</u>	54
		268,980	

*RT-S = Shasta strain
 RT-KJ = Kamloops Junction strain
 RT-W = Whitney strain
 RT-H = Hot Creek strain

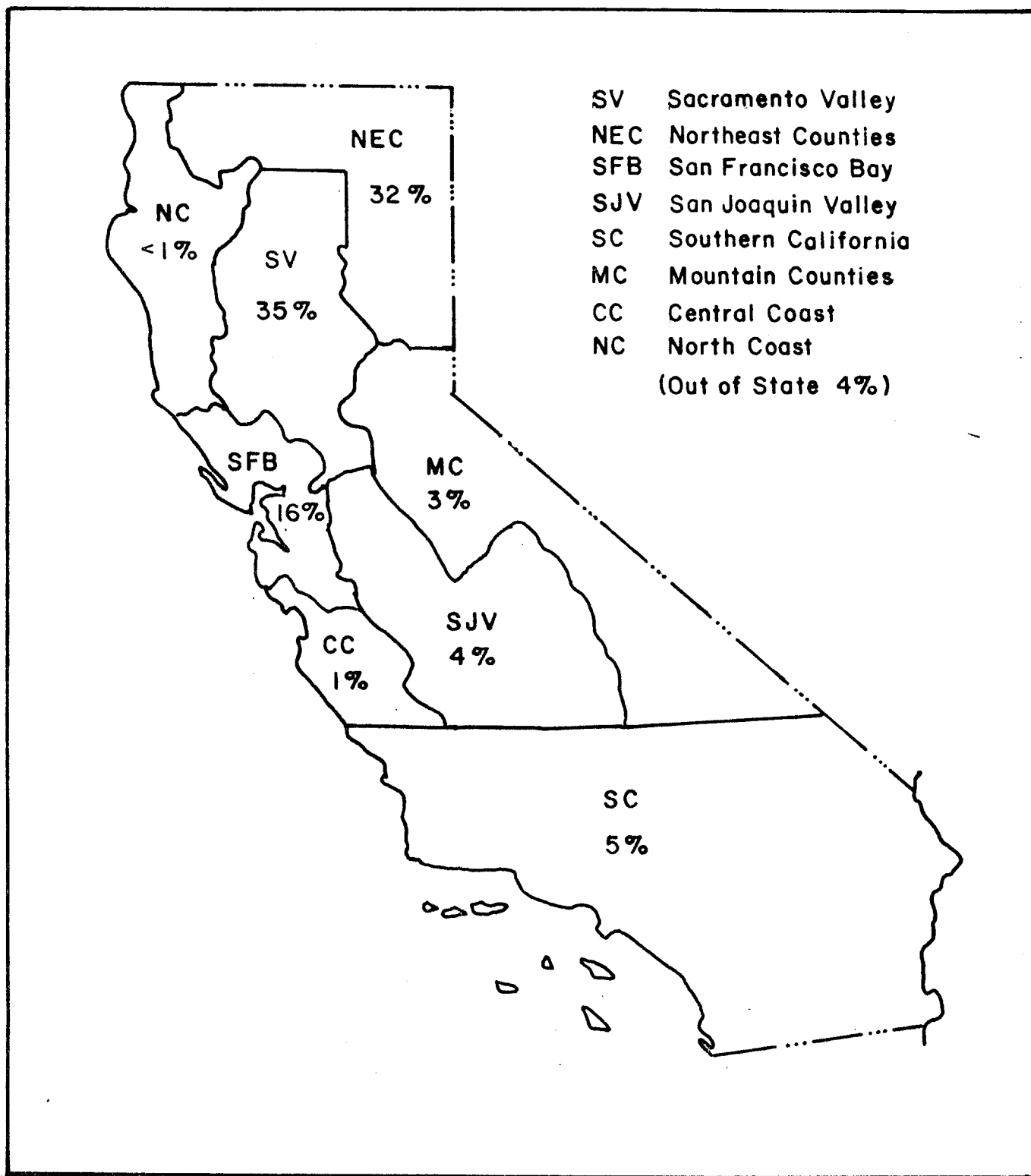


Figure 3 - Antelope Lake Angler Origin by County Groups
1979

TABLE 4
 ANTELOPE LAKE, 1979
 SUMMARY OF ESTIMATED ANGLER HOURS AND FISH CAUGHT BY MONTH^{1/}

Month	Days of Use Counts	Shore Anglers			Boat Anglers		
		Total Angler Hours	Rainbow Trout Caught	Brown Bullhead Caught	Total Angler Hours	Rainbow Trout Caught	Brown Bullhead Caught
April	2	2,100	700	0	900	1,000	0
May	10	13,000	5,300	1,100	8,200	8,800	0
June	10	13,700	4,500	400	8,000	3,800	100
July	6	22,300	4,200	1,000	16,300	600	900
August	8	12,200	2,300	3,300	7,200	2,600	0
September	6	6,100	1,600	1,600	3,400	3,200	500
October	2	300	200	50	0	0	0
November	2	300	200	50	0	0	0
Total	46	70,000	19,000	7,500	44,000	20,000	1,500

^{1/} April 28 to November 15

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Boat fishermen were very difficult to interview. A boat was used to contact anglers on only three days during the survey. Success contacting fishermen by boat was good but fishermen did not appreciate the interruption of their fishing. Most boat anglers were contacted from shore, resulting in less than one percent of the estimated boat angler-hours being censused.

Limitations of Use Counts

Most fishermen at the dam area were easily visible for the use counts. Due to the irregular shoreline, many areas around the rest of the lake were more difficult to see. Total counts were made whenever possible by driving around the lake. These data were much more variable than the dam, peninsula, and vista point counts. Counts were most accurate during low use periods such as weekdays. Use of a boat to make use counts would have provided more complete and accurate counts, but a boat was not available for most of the survey season.

Comparison of 1978 and 1979

No use counts were made in 1978, but a creel census was conducted on 29 days from June 9 to November 4. The catch per hour was 40 percent higher in 1979, 0.28 fish per hour compared to 0.20 fish per hour in 1978. However, larger trout were caught in 1978; the average length was 30 cm (11.8 in) and only 26 cm (10.2 in) in 1979. Likewise, most of the trout caught in 1978 ranged from 23 to 34 cm (9.1 to 13.4 in) compared to 23 to 30 cm (9.1 to 11.8 in) in 1979. The catch rate for brown bullhead was 0.08 fish per hour in 1979 and only 0.01 fish per hour in 1978. It is obvious that Antelope Lake again has a significant population of brown bullhead.

APPENDIX 1
ANTELOPE LAKE, 1979
SUMMARY OF CATCH PER HOUR (SHORE ONLY)

APPENDIX 1

ANTELOPE LAKE, 1979
SUMMARY OF CATCH PER HOUR (SHORE ONLY)

Date	Anglers	Angler Hours	Rainbow Trout Caught	Catch Per Hour	Other Fish Caught	Catch Per Hour
April 28	103	287.5	94	0.327	0	0
April 29	<u>100</u>	<u>258.75</u>	<u>82</u>	<u>0.317</u>	<u>0</u>	<u>0</u>
April Total	203	546.25	176	0.322	0	0
May 4	56	94.25	36	0.382	0	0
May 5	1	0.25	0	0	0	0
May 6	45	56.5	33	0.584	0	0
May 13	45	104	53	0.510	9 BB*	0.086
May 14	39	79.25	44	0.555	4 BB	0.050
May 16	20	67	23	0.343	28 BB	0.418
May 17	14	22.25	6	0.270	5 BB	0.225
May 26	67	124	44	0.355	2 BB	0.016
May 27	119	305.25	124	0.406	35 BB	0.115
May 31	<u>26</u>	<u>93.75</u>	<u>24</u>	<u>0.256</u>	<u>0</u>	<u>0</u>
May Total	432	946.5	387	0.409	83	0.088
June 1	95	254	47	0.185	7 BB	0.027
June 2	53	134.75	29	0.215	0	0
June 6	46	91.5	34	0.372	0	0
June 7	63	109.5	43	0.393	1 BB	0.009
June 13	48	116	34	0.293	0	0
June 14	46	126.5	60	0.474	0	0
June 16	67	167.75	90	0.537	0	0
June 17	42	93.33	43	0.461	16 BB	0.171
June 18	60	125.33	47	0.375	1 BB	0.008
June 26	22	63.25	14	0.221	9 BB	0.142
June 30	<u>20</u>	<u>111.25</u>	<u>14</u>	<u>0.126</u>	<u>8 BB</u>	<u>0.072</u>
June Total	562	1,393	455	0.327	42	0.030
July 1	140	447.75	67	0.150	5 BB	0.011
July 2	45	72.75	13	0.179	3 BB	0.041
July 3	129	296.25	42	0.142	11 BB	0.037
July 4	123	279.25	82	0.294	26 BB	0.093
July 17	24	41.5	8	0.193	0	0
July 18	39	145	13	0.090	2 BB	0.014
July 20	30	88	33	0.375	4 BB	0.045
July 21	53	79.75	11	0.138	14 BB	0.176
July 22	<u>48</u>	<u>123.5</u>	<u>18</u>	<u>0.146</u>	<u>5 BB</u>	<u>0.040</u>
July Total	631	1,573.75	287	0.182	70	0.044

*BB = brown bullhead

Date	Anglers	Angler Hour	Rainbow Trout Caught	Catch Per Hour	Other Fish Caught	Catch Per Hour
August 3	18	77.5	18	0.232	0	0
August 4	54	76.75	15	0.195	1 GSH*	0.013
August 5	47	72.5	20	0.276	1 BB *	0.014
August 7	23	30.5	8	0.262	22 BB	0.721
August 8	29	60	15	0.250	1 BB	0.017
August 18	62	89.25	19	0.213	7 BB	0.078
August 19	42	61.25	4	0.065	35 BB	0.571
August 22	32	56	7	0.125	26 BB	0.464
August 23	21	21.25	4	0.188	3 BB	0.141
August 27	23	16.75	1	0.060	9 BB	0.537
					1 GSH	0.060
August 28	19	28	1	0.036	58 BB	2.071
August Total	370	589.75	112	0.190	162 BB 2 GSH	0.275 0.003
September 1	75	152.75	40	0.262	13 BB	0.085
September 2	3	24	3	0.125	0	0
September 8	42	83.25	34	0.408	66 BB	0.793
September 9	29	60.5	17	0.281	16 BB	0.264
September 22	18	30.25	3	0.099	2 BB	0.066
September 23	11	8.75	2	0.229	2 BB	0.229
September 27	19	42.5	4	0.094	9 BB	0.212
September Total	197	402	103	0.256	108	0.269
October 18	5	16.5	15	0.909	1 BB	0.061
October 19	3	24	7	0.292	0	0
October Total	8	40.5	22	0.543	1	0.025
November 9	4	5.5	0	0	0	0
November 10	7	12.5	8	0.640	4 BB	0.320
November Total	11	18.0	8	0.444	4	0.222
Grand Total**	2,414	5,509.75	1,550	0.281	470 BB 2 GSH	0.085 0.0004

*GSH = golden shiner, BB = brown bullhead

**April 28 to November 10

APPENDIX 2

ANTELOPE LAKE, 1979

SUMMARY OF CATCH PER HOUR (BOAT ONLY)

APPENDIX 2

ANTELOPE LAKE, 1979
SUMMARY OF CATCH PER HOUR (BOAT ONLY)

Date	Anglers	Angler Hours	Rainbow Trout Caught	Catch Per Hour	Other Fish Caught	Catch Per Hour
April 28	6	22	27	1.227	0	0
April 29	<u>3</u>	<u>3</u>	<u>5</u>	<u>1.667</u>	<u>0</u>	<u>0</u>
April Total	9	25	32	1.280	0	0
May 4	5	3	5	1.667	0	0
May 14	6	6	9	1.500	0	0
May 27	<u>17</u>	<u>44.5</u>	<u>44</u>	<u>0.989</u>	<u>0</u>	<u>0</u>
May Total	28	53.5	58	1.084	0	0
June 1	2	5	4	0.800	0	0
June 6	7	33	12	0.364	2	0.061
June 7	2	3.5	1	0.286	0	0
June 13	3	.75	1	1.333	0	0
June 14	20	47	17	0.362	0	0
June 16	2	4	3	0.750	0	0
June 17	0	0	0	0	0	0
June 18	5	14	13	0.929	0	0
June 26	2	3	0	0	0	0
June 30	<u>1</u>	<u>1</u>	<u>2</u>	<u>2.000</u>	<u>0</u>	<u>0</u>
June Total	44	111.25	53	0.476	2	0.018
July 20	6	22	3	0.136	2 BB*	0.090
July 21	20	53.5	0	0	3 BB	0.056
July 22	<u>7</u>	<u>13</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
July Total	33	88.5	3	0.034	5	0.056
August 8	2	4	0	0	0	0
August 23	2	6	6	1.000	0	0
August 28	<u>3</u>	<u>9</u>	<u>1</u>	<u>0.111</u>	<u>0</u>	<u>0</u>
August Total	7	19	7	0.368	0	0
September 8	17	22.5	23	1.022	4 BB	0.178
September 27	<u>2</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
September Total	<u>19</u>	<u>23.5</u>	<u>23</u>	<u>0.978</u>	<u>4</u>	<u>0.170</u>
Grand Total**	140	320.75	176	0.549	11	0.034

*BB = brown bullhead

**April 28 to November 10

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APPENDIX 3
ANTELOPE LAKE CREEL CENSUS - 1979
RAINBOW TROUT
(CENTIMETERS)

APPENDIX 3

 ANTELOPE LAKE CREEL CENSUS - 1979
 RAINBOW TROUT
 (centimeters)

Date	No.	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	NM*	
Apr 28	121	-	-	-	-	-	-	1	-	1	-	1	1	3	10	8	31	11	7	3	4	-	1	2	3	1	2	-	-	-	-	-	-	-	-	-	31
29	87	-	-	-	-	-	-	-	-	-	1	2	-	1	4	4	20	21	9	6	2	2	3	1	-	1	1	-	1	-	-	-	-	-	1	7	
May 4	41	-	-	-	-	-	-	-	-	-	-	2	-	-	3	4	12	6	8	3	1	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	
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Jul 1	67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	7	13	9	12	6	5	5	-	1	1	2	1	1	-	2	-	-	-	-	-	
2	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	3	1	-	-	-	-	-	1	2	-	-	-	-	-	-	4	
3	42	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	1	9	7	8	1	2	-	-	1	2	-	2	3	-	-	-	-	-	3	
4	82	1	-	-	-	-	-	-	-	-	-	1	1	-	2	2	10	7	9	14	17	8	3	-	-	-	2	2	-	1	-	-	-	-	-	2	
17	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	-	-	-	-	-	-	-	1	1	-	-	-	-	-	
18	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2	2	2	-	-	1	-	-	1	1	-	-	-	-	-	-	-	-	
20	36	-	-	-	-	1	-	-	-	-	-	-	-	1	1	-	6	5	6	5	1	2	2	-	-	-	1	-	-	1	-	-	-	-	-	4	
21	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	-	4	3	-	-	-	-	-	-	1	-	-	-	-	-	-	-	
22	18	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	3	4	3	1	-	1	2	-	1	-	-	-	-	-	-	-	-	-	-	

*NM - not measured

APPENDIX 3

ANTELOPE LAKE CREEL CENSUS - 1979 RAINBOW TROUT (centimeters)

Date	No.	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	NM*	
Aug 3	18	-	-	-	-	-	-	-	-	-	-	-	1	-	1	2	7	2	1	-	-	2	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-
4	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	4	2	2	5	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	20	-	-	-	-	-	-	-	-	1	-	-	1	-	2	3	4	3	1	4	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
7	8	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	2	2	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
8	15	-	-	-	-	-	-	-	1	-	1	-	1	-	-	1	-	1	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	19	-	1	-	-	-	-	-	-	1	3	-	2	1	-	2	-	1	2	2	1	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
19	4	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	
22	7	-	-	-	-	-	-	-	-	1	-	1	-	-	1	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
23	10	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
27	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
28	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sep 1	40	-	-	-	-	-	-	1	1	1	1	3	3	1	2	5	8	2	8	3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
8	57	-	-	1	3	1	-	-	1	3	2	4	2	1	-	-	3	4	5	2	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
9	17	-	-	1	2	1	1	-	-	2	2	-	2	-	-	1	-	-	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
22	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
23	2	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
27	4	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Oct 18	15	-	-	-	-	-	-	-	-	-	-	1	-	-	3	3	2	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
19	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Nov 9	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
10	8	-	-	-	-	2	-	1	1	1	1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total	1,726	1	1	2	7	5	1	4	5	13	14	24	23	15	82	115	277	252	224	201	124	51	22	9	16	10	17	12	12	12	5	1	1	-	2	166	

*NM - not measured

APPENDIX 4
ANTELOPE LAKE, 1979
ANGLER RESIDENCE SUMMARY

APPENDIX 4

ANTELOPE LAKE, 1979
ANGLER RESIDENCE SUMMARY

<u>County of Residence</u>	<u>Number</u>	<u>Percent</u>
Alameda	41	1.6
Butte	605	23.7
Calaveras	5	0.2
Colusa	2	0.1
Contra Costa	99	3.9
El Dorado	1	<0.1
Fresno	7	0.3
Glenn	14	0.5
Humboldt	4	0.2
Inyo	1	<0.1
Kern	9	0.4
Kings	1	<0.1
Lake	19	0.7
Lassen	538	21.1
Los Angeles	50	2.0
Marin	23	0.9
Mendocino	4	0.2
Merced	3	0.1
Modoc	3	0.1
Monterey	12	0.5
Napa	29	1.1
Nevada	10	0.4
Orange	12	0.5
Placer	31	1.2
Plumas	277	10.9
Riverside	4	0.2
Sacramento	87	3.4
San Bernardino	5	0.2
San Diego	25	1.0
San Francisco	31	1.2
San Joaquin	86	3.4
San Luis Obispo	1	<0.1
San Mateo	21	0.8
Santa Clara	80	3.1
Santa Cruz	23	0.9
Shasta	19	0.7
Sierra	2	0.1
Siskiyou	3	0.1
Solano	20	0.8
Sonoma	65	2.6
Stanislaus	7	0.3
Sutter	39	1.5
Tehama	40	1.6
Tulare	4	0.2
Tuolumne	29	1.1
Ventura	8	0.3
Yolo	12	0.5
Yuba	48	1.9
Out of State	90	3.5
Total	2,549	100.0